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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/080,861	05/18/1998	HIROSHI ENDO	1272.6808CI/	9856

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EXAMINER

LEE, TOMMY D

ART UNIT PAPER NUMBER

2624

DATE MAILED: 07/25/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/080,861

Applicant(s)

ENDO ET AL.

Examiner

Thomas D. Lee

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 April 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action is responsive to applicant's amendment filed April 23, 2002. In view of applicant's remarks on pages 2-4 of the amendment, the prior rejection of claims 13-27 as set forth in the Office action dated November 23, 2001 is withdrawn. However, the claims are not deemed to be allowable for the reasons set forth below.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 13-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,335,295 (Ferracini et al.) in view of U.S. Patent 4,394,693 (Shirley).

Regarding claims 13-20, Ferracini et al. teach an image processing section comprising: a memory for storing the image data (noting Fig. 3, image buffer 102, line buffer 312 within shrinking module 108 (column 4, lines 26-32)); first processing means for executing image data magnifying processing based on first magnifying rate information (noting Fig. 1, interpolator module 104 (column 3, lines 8-17)); and second processing means for executing the image data magnifying processing for an image based on the image data magnified by said first processing means, based on second magnifying rate information (shrinking module 108 (column 3, lines 30-34)), wherein said first magnifying rate information is determined based on at least one of a resolution of printing performed by said printing section, an processing load to be borne by said first processing means, a capacity of said memory and a resolution shown by the image

data, and a magnification rate of the image based on the image data (magnification rate determined on the basis of a magnification rate of the image to be output based on the image data (column 4, lines 51-60)). Said second magnifying rate information is determined based on said first magnifying rate information and the magnifying rate of the image to be output based on the image data (column 4, lines 61-67). The magnifying rate of the image is a magnifying rate corresponding to a product of a magnifying rate shown by said first magnifying rate information multiplied by a magnification rate shown by said second magnifying rate information (column 4, line 67). Said memory is provided to store the image data magnified by said first processing means (intermediate image inherently stored so that the shrinking operation may be performed on the intermediate image as disclosed at column 5, lines 1-18).

Ferracini et al. do not teach a printing system including a printing section to perform printing on a printing medium (claim 13), wherein said second processing means is provided in the printing section (claim 17), the printing section having a printing apparatus using a printing head to perform printing on the printing medium and the image processing section having an apparatus outputting the image data to the printing apparatus (claim 18), wherein the printing head is an ink jet head ejecting ink onto the printing medium (claim 19), wherein the ink jet head has electro-thermal converting element applying thermal energy to ink to eject the ink by utilizing the thermal energy (claim 20). Shirley teaches a system and method for generating enlarged or reduced images (note Abstract), which is performed on a printing system including a printing section (noting Fig. 1, image reproduction system 39) having a

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printing apparatus using a printing head (ink jet array 32) to perform printing on the printing medium (paper 34) and the image processing section having an apparatus outputting the image data to the printing apparatus (data output to ink jet control 30). The method may be applied to a thermal picture reproduction system as well (column 3, lines 10-16). Whether processing means for scaling the image is providing in the printing section is a matter of design choice, so long as the processing means is present anywhere between image capture and image reproduction.

One of ordinary skill in the art would have recognized the need to provide a means for magnifying or reducing image data such as taught by Ferracini et al. in an ink jet or thermal printer, since magnification and reduction are features in general are well-known features in such printers. Therefore, applying the method of scaling images as taught by Ferracini et al. in an ink jet or thermal printer would have been an obvious modification to one of ordinary skill in the art.

Claims 21-27 are method claims corresponding to system claims 13-19, respectively, and thus are rejected for the reasons mentioned above.

### ***Conclusion***

4. In view of new grounds for rejection not necessitated by amendment, this Office action is non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (703) 305-4870. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Thomas D. Lee  
Primary Examiner  
Art Unit 2624

tdl  
July 24, 2003